they appear to be transient, returning to normal in two to four weeks even with continued therapy. Also, elevations of triglycerides and very low-density lipoproteins have been noted with the use of the new retinoids, but the exact incidence, long-term importance and effect of dietary management on these elevations have not been determined. Again these recognized toxicities, besides being generally mild, are usually treatable with innocuous therapies, are dose dependent in severity and incidence, and are reversible after discontinuing therapy.

The mechanism of action of the retinoids is unknown. Vitamin A is known to be necessary for maintenance of normal cellular differentiation of epithelial tissues. This property probably accounts, at least in part, for the therapeutic efficacy of retinoids. In addition, investigations indicate that the usefulness of 13-cis-retinoic acid in the treatment of acne may involve a direct inhibitory effect of the drug on sebaceous glands.

The new retinoids may become an extremely useful therapeutic modality for the treatment of certain dermatoses. However, further investigations need to be undertaken to determine their exact mechanism of action, efficacy in controlled trials, chronic toxicity, and the ideal dosages for initial and maintenance treatment.

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New Developments in the Staging and Therapy of Mycosis Fungoides

THE STAGING OF patients with mycosis fungoides is now based on two criteria: the ability to confirm the diagnosis of the disease in skin infiltrates and the ability to evaluate the extent of involvement in the patient's lymphoreticular system. The diagnosis of mycosis fungoides in the skin is made according to the extent of infiltration into the epidermis. The presence of numerous, large aggregates of abnormal lymphocytic cells or a diffuse and dense infiltrate of these cells within the epidermis indicates the presence of the disease. If there are only small aggregates or a patchy diffuse infiltration of these abnormal lymphocytic cells, then an accurate diagnosis cannot be confirmed unless there is also a dense infiltrate in the reticular dermis. Further biopsy specimens may be needed to confirm the diagnosis. Evaluation of lymph nodes is made by obtaining biopsy specimens of the superficial regional glands. A bipedal lymphangiogram should be obtained to evaluate the internal nodes. A biopsy is mandatory if the lymphangiogram shows abnormal nodes or if there is extensive skin infiltration.

Recent studies in patients in various stages of the disease showed a progressive decrease in the immunologic response, as manifested by lymphoblast transformation to phytohemagglutinin and to cells cultured from mycosis fungoides plaques on the skin as one passes through increasingly involved stages of the disease. Similarly, there is a progressive decrease in the stimulation index when the patient's peripheral blood lymphocytes are utilized as responder cells in mixed lymphocyte cultures. Different types of sera added to the culture media have either an inhibitory or facilitory effect and are found to be nonspecific and without correlation to the extent of disease.

New observations in the therapy of mycosis fungoides include the finding that mechlorethamine, when compounded in a hydrophobic vehicle (Aquaphor), instead of an aqueous solution, is more readily tolerated by the patients. In fact, it is associated with a much lower incidence of contact dermatitis as compared with the aqueous solution. Preliminary studies showed that in eight patients with no previous history of exposure or hypersensitivity to mechlorethamine, all tolerated the therapy without complication. In eight other patients with a history of pronounced hypersensitivity to mechlorethamine and an inability to become desensitized, six tolerated the mechlorethamine in Aquaphor. The other two had an immediate hypersensitivity reaction coupled with the unexpected result of immediate clearing of their mycosis fungoides. To date, the average duration of treatment using the Aquaphor vehicle has been 9 months with a range of 1 to 14 months.

Psoralens and ultraviolet light (PUVA; psoralen-ultraviolet A) have been advocated for treatment of mycosis fungoides. However, this form of therapy is effective only as long as the treatment is maintained; when discontinued, the condition usually recurs. PUVA therapy has not been advocated in erythrodermic patients who are usually extremely sensitive to all forms of therapy including electron beam and mechlorethamine. However,

among seven erythrodermic patients who have been treated in the past 24 months with PUVA therapy, clearing of the condition has occurred in six. As observed with other types of mycosis fungoides, there was a recurrence of the disease in the four patients in whom treatment was not maintained. However, subsequent therapy controlled the disease and all the patients are being maintained on PUVA therapy indefinitely.

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Skin Lesions in Bowel Bypass Syndrome

INTESTINAL BYPASS OPERATIONS as a treatment for morbid obesity have been used since the mid-1950's. Complications have included diarrhea, distention, abdominal pain, pneumatosis cystoides intestinalis, arthralgias, arthritis, renal calculi, gallstones, hepatic abnormalities, electrolyte disturbance and erythema nodosum-like skin eruptions. Three recent articles have reported papulopustular eruptions in six patients following bowel bypass operations.

Hansen and co-workers reported on two patients in whom arthritis, erythema nodosum, and a primarily acral erythematous eruption of papules and pustules developed following jejunoileal bypass operations. The arthritis was minimally responsive to nonsteroid antiinflammatory drugs. Both the arthritis and the skin eruptions improved on treatment with various antibiotic drugs including tetracycline, metronidazole, minocycline and erythromycin. One patient's condition relapsed when antibiotic treatment was withdrawn, but it was later controlled on therapeutic doses of zinc sulfate. Bowel symptomatology was absent. No serological evidence of circulating immune complexes was found. A biopsy specimen of skin from one patient showed an intraepidermal vesicle with a mild leukocytoclastic inflammation of dermal vessels. Direct immunofluorescence of skin was negative.

Goldman and co-workers reported on two patients with end-to-end jejunoileal bypass operations in whom arthralgia, arthritis and a primarily acral erythematous papular and pustular eruption developed. Bowel symptomatology was present in one patient and fever and chills in the other. The first patient responded initially to treatment with penicillin and tetracycline. Subsequently, she did not respond to antibiotic drugs, but did respond to aspirin; later her condition cleared spontaneously. The second patient's condition improved on carbenicillin therapy, while aspirin and nonsteroid antiinflammatory drugs were not helpful. Both patients had elevated erythrocyte sedimentation rates and negative complement 3 and 4 (C3 and C4). The first patient had negative findings on antinuclear antibodies (ANA), rheumatoid factor, cryoglobulin and platelet aggregation tests, but had HLA-B27 positive tissue typing and a positive complement consumption test. The second patient had a negative complement consumption test but a positive platelet aggregation test and ANA-positive 1:320 nucleolar pattern. Biopsy specimens of skin showed a leukocytoclastic vasculitis in both patients. Direct immunofluorescence of skin from the first patient was negative.

Dicken and colleagues reported on two patients who had a primarily acral and upper chest distribution of erythematous papules and pustules, and elevated temperatures following bowel bypass operations. The episodes lasted six days or less and tended to recur. Occasionally, myalgias and polyarthralgia were noted during episodes but not during quiescent periods. The first patient responded to administration of metronidazole. The second patient did not respond to ampicillin therapy but had some decrease in the frequency of eruptions with administration of tetracycline; clearing occurred after surgical restitution of the bypassed segment of bowel. A biopsy specimen of skin from the first patient showed a subepidermal vesicle with heavy mixed-cell dermal inflammation composed of lymphocytes, polymorphonuclear leukocytes and rare plasma cells. No evidence of vasculitis was reported. Direct immunofluorescence showed a patchy, weak basement membrane pattern with C3 but was negative for IgG, IgM and IgA.

The six patients exhibited a primarily acral and upper chest distribution of erythematous papules and pustules. The severity of polyarthralgia or arthritis seemed to parallel the course of the eruption and its response to antibiotic therapy. Serological evidence of circulating immune complexes was found in two of the six cases. Histological